

EMCAL CLUSTERS

⇒ So far, cluster identification is based on purely geometrical criteria

- “ON” blocks having a common side are placed into the same cluster
- The only requirement for their response is to be above a certain threshold

⇒ It is a very simple and efficient method.

BUT:

⇒ This method has no means to separate overlapping showers

- The case of overlapping showers in the EMCAL has already proven to be important in our attempt to test EMCAL calibration
 - *eg. E/p ratio tests (with Vittorio's broom events) where overlapping showers result in an overestimation of energy*
- We plan to develop some numerical criteria that will help us recognize any internal structure of the EMCAL clusters
 - *Methods of overlapped clusters separation should involve tracking info and the cluster profile.*

LIST OF FOLLOWING FIGURES:

Figs 1 – 2 ‘single showers’

Figs 3 – 5 ‘overlapping showers’

- *each bin is $7.5 \times 7.5 \text{ cm}^2$ (it represents a small block in the EMCAL)*
- *obviously 4 bins are used to represent a big ($15 \times 15 \text{ cm}^2$) EMCAL block*
- *the vertical axis is block energy in GeV*

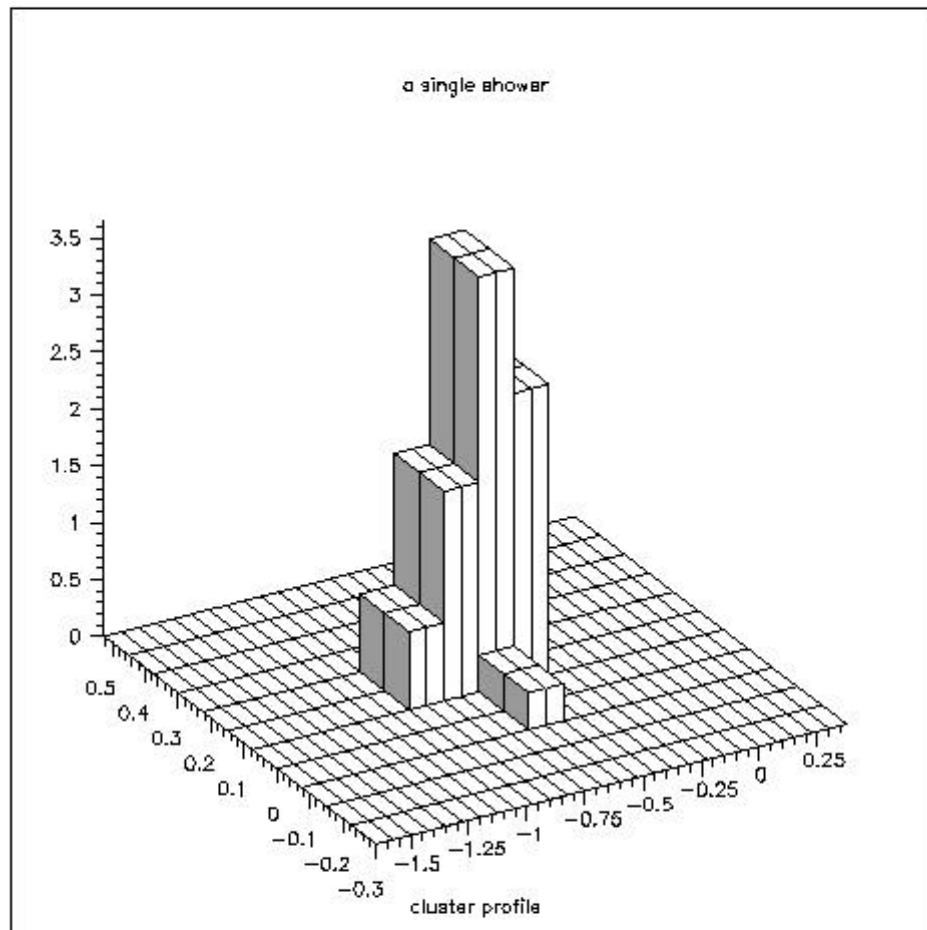


Fig. 1

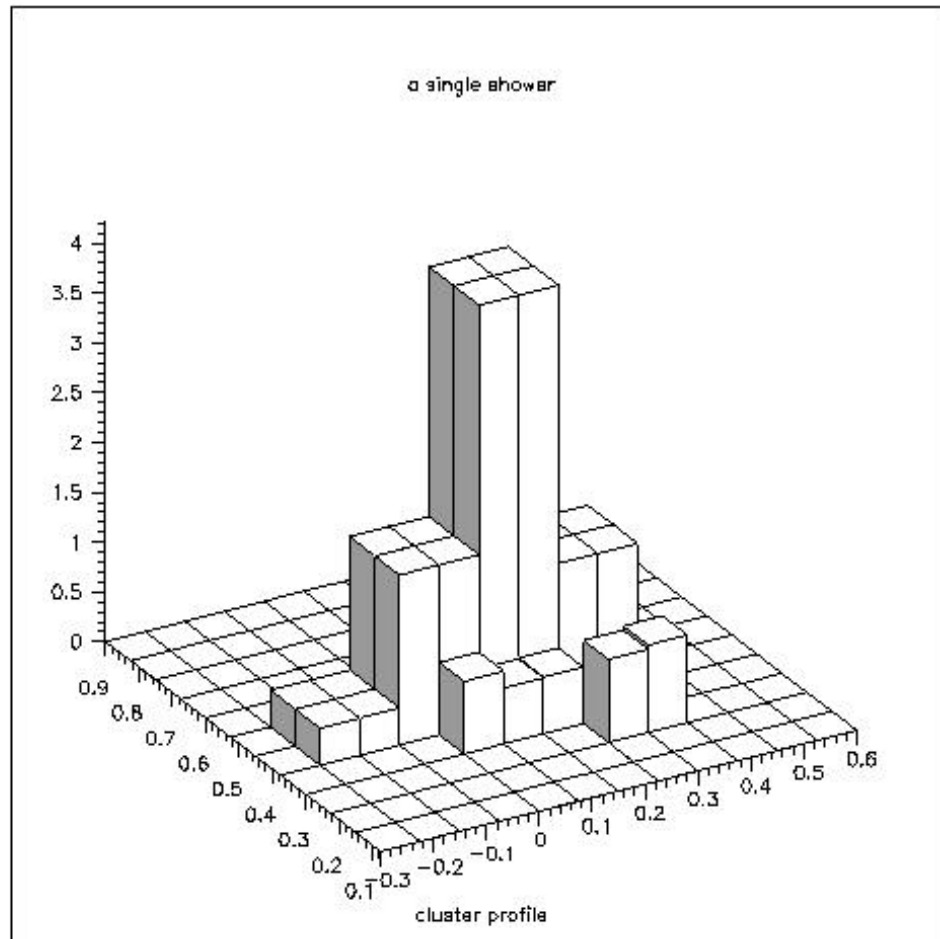


Fig.2

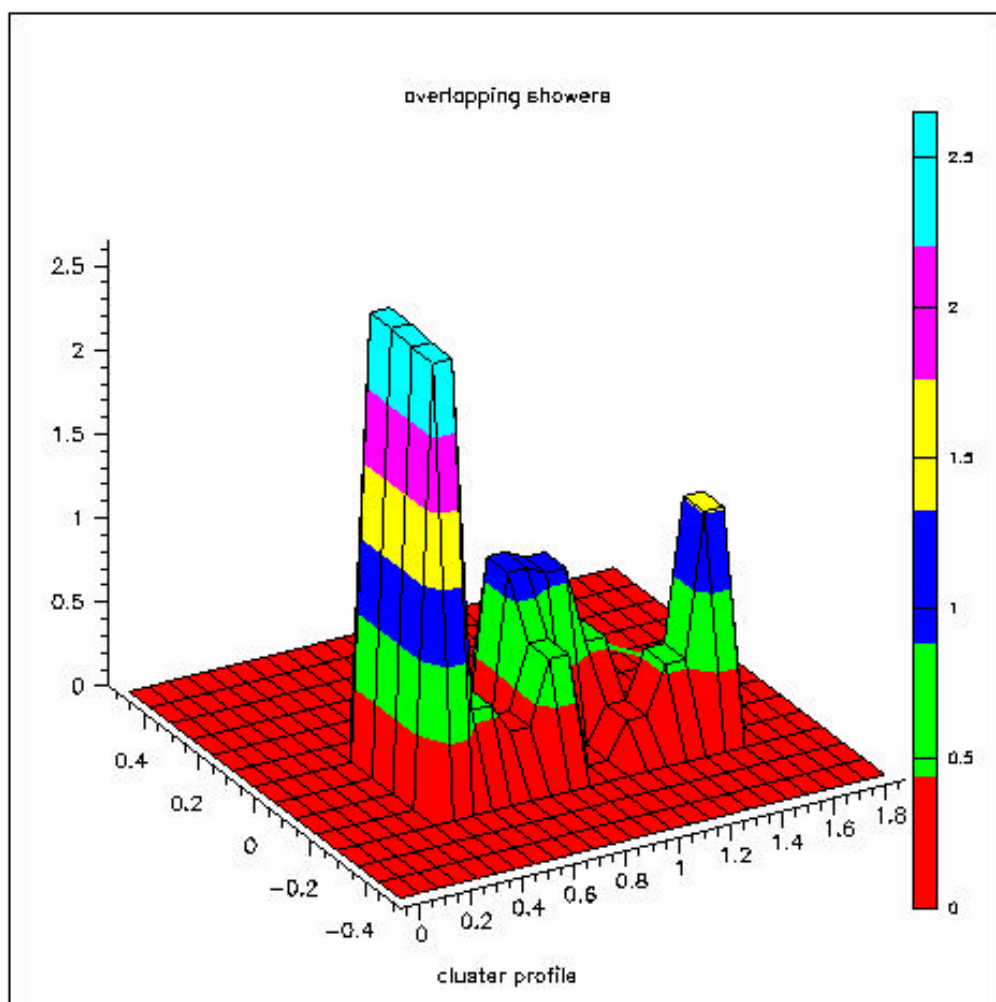


Fig. 3

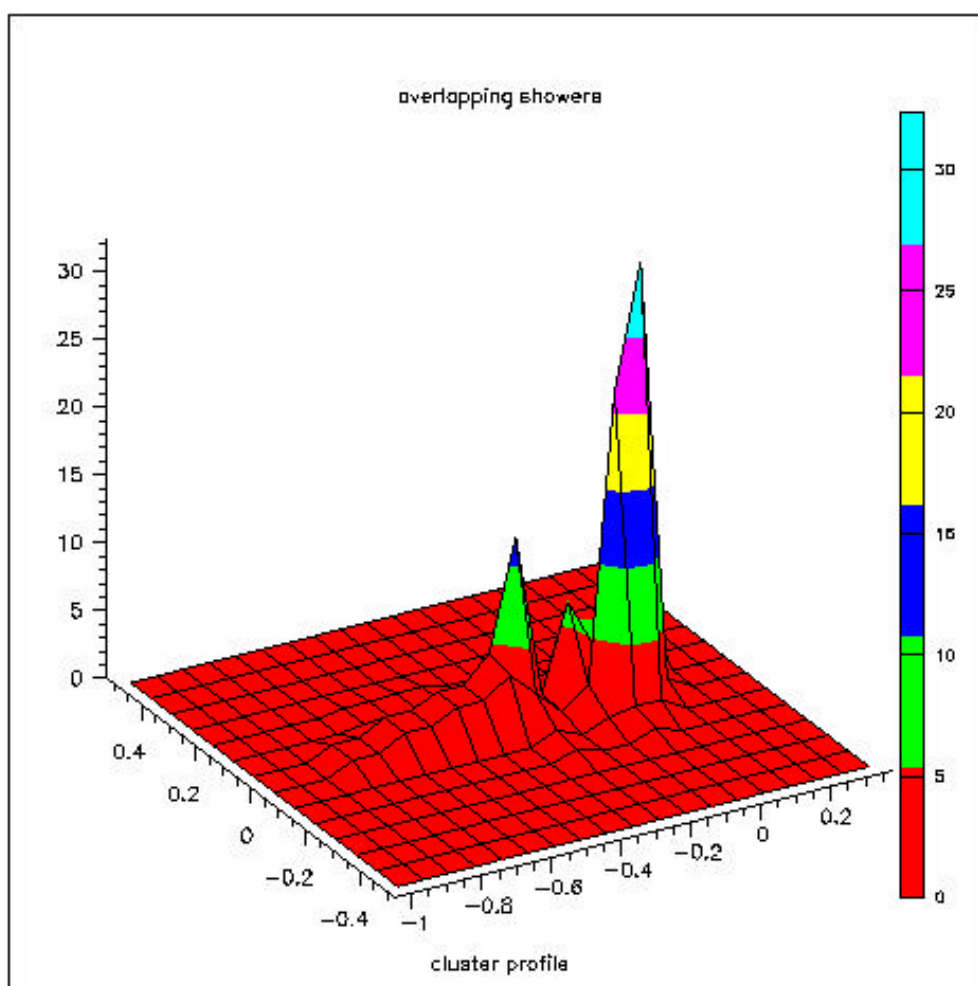


Fig. 4

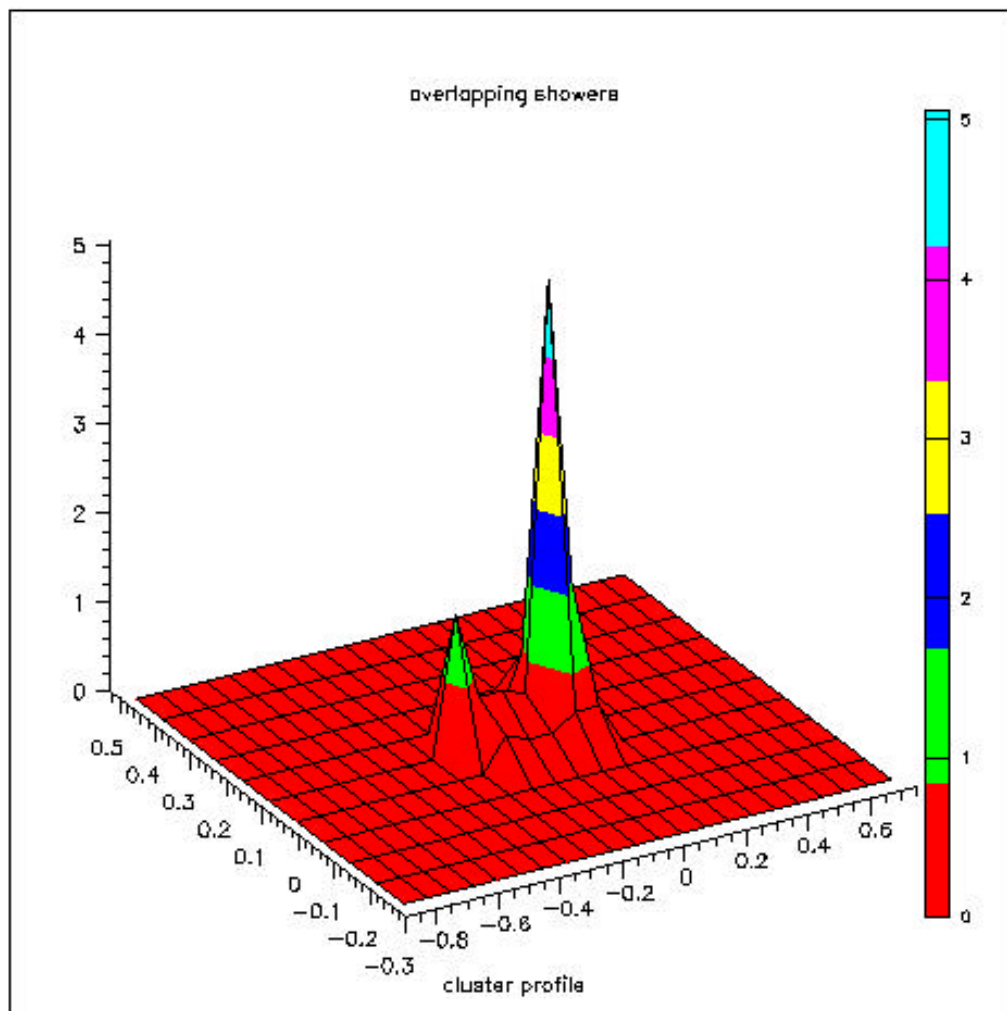


Fig.5